



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/363,966	07/29/1999	JOHN F. ARACKAPARAMBIL	004066/CONS/	8777

32588 7590 09/29/2004

APPLIED MATERIALS, INC.
2881 SCOTT BLVD. M/S 2061
SANTA CLARA, CA 95050

COMPUTER ENTERED
OCT 05 2004

EXAMINER

GARLAND, STEVEN R

ART UNIT	PAPER NUMBER
----------	--------------

2125

39

DATE MAILED: 09/29/2004

OFC 12-29-04
Dead 3-29-05

Please find below and/or attached an Office communication concerning this application or proceeding.

REC'D OCT 04 2004

Office Action Summary	Application No. 09/363,966	Applicant(s) ARACKAPARAMBIL ET AL.	
	Examiner Steven R Garland	Art Unit 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on see office action.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-117 is/are pending in the application.
- 4a) Of the above claim(s) 13-35, 48-55 and 66-69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 36-47, 56-65, 70-117 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>24, 29, 33, 34, 38</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Responsive to the papers filed 12/31/03;7/3/3;11/17/03;10/9/03,12/18/03;7/1/04; and 8/11/04.
2. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 7/1/04, to replace the amendment of 11/17/03, which was not fully responsive, has been entered.
3. The information disclosure statements filed 12/31/02 (Paper No. 24), 7/3/03 (Paper No. 29), 10/9/03 (Paper No. 33), and 12/18/03 (Paper No. 34) have been considered.
4. The information disclosure statement filed 8/11/04 (Paper No. 38) has been considered to the extent indicated. Various U.S. application numbers are listed in the OTHER ART section, however the listing does not comply with the requirements of 37 CFR 1.98 (b)(3), since the listing must also include the application filing date and inventor name.
5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2125

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-11, 36-47, 56-65, 70 and 71 are rejected under 35 U.S.C. 102(e) as being anticipated by Tan et al. 6,263,255.

Tan teaches computer implemented factory automation for semiconductor processing including defining, installing, and administrating activity framework components; modeling components; use of controlling, monitoring , and tracking components. Tan also teaches plug and play components; creation and deletion of components; use of a history; control of semiconductor IC manufacturing; use of user and tool interfaces including GUI; use of databases and data structures; storing the software on a medium (col. 3, lines 25-48); context resolution; data analysis; use of a data manager; defining interactions between components; updating software; planning; and use of processing equipment and computers . Tan also teaches automatically developing using iteration and the use of a manufacturing execution system. See the abstract; figures; col. 2, line 58 to col. 3, line 48; col. 5, lines 15-67; col. 6, line 51 to col. 8, line 35; col. 9, lines 1-26; col. 11, lines 1-45; col. 12, lines 18-67; col. 13, lines 1-63; col. 14, lines 43-57; col. 15, line 19 to col. 16, line 17; col. 29, lines 58-64; and the claims.

In response to applicant's arguments, Tan discloses the use of a plurality of fabrication tools in the form of a plurality of processing equipment devices. Note claims 8 and 9; col. 3, lines 18-21 in which tools are specifically mentioned; for example.

Art Unit: 2125

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 72-77, 79-89, 91-100, 102-112, and 113-117 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tan 6,529,789.

Tan teaches computer implemented factory automation for semiconductor processing including defining, installing, and administrating activity framework components; modeling components; use of controlling, monitoring , and tracking components. Tan also teaches plug and play components; creation and deletion of components; use of a history; control of semiconductor IC or wafer manufacturing; use of user and tool interfaces including GUI; use of databases and data structures; storing the software on a medium (col. 3, lines 25-48); context resolution; data analysis; use

of a data manager; defining interactions between components; updating software; planning; and use of processing equipment and computers . Tan also teaches automatically developing using iteration and the use of a manufacturing execution system. Tan further teaches that the interfacing allows translation of commands and tool control in col. 7, lines 1-20. Tan also teaches configuring and modification in col. 5, lines 15-45. See the abstract; figures; col. 2, line 58 to col. 3, line 48; col. 5, lines 15-67; col. 6, line 51 to col. 8, line 35; col. 9, lines 1-26; col. 11, lines 1-45; col. 12, lines 18-67; col. 13, lines 1-63; col. 14, lines 43-57; col. 15, line 19 to col. 16, line 17; col. 29, lines 58-64; and the claims.

Tan however does not specifically state that the tool is modeled, but does teach modeling a process and the use of plural tools. See col. 5, lines 63-65; and claims 8 and 9; col. 3, lines 18-21; for example.

It would have been obvious to one of ordinary skill in the art to modify Tan to model a process as either a model of the tool used to perform the process or the actual process model depending upon which is either easier to model, simpler to model, or more accurate.

10. Claims 12, 78, 90, 101, and 112 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tan et al. 6,263,255 in view of Mashruwala et al. 5,295,242, cited by applicant.

Tan teaches computer implemented factory automation for semiconductor processing including defining, installing, and administering activity framework components; modeling components; use of controlling, monitoring , and tracking

Art Unit: 2125

components. Tan also teaches plug and play components; creation and deletion of components; use of a history; control of semiconductor IC or wafer manufacturing; use of user and tool interfaces including GUI; use of databases and data structures; storing the software on a medium (col. 3, lines 25-48); context resolution; data analysis; use of a data manager; defining interactions between components; updating software; planning; and use of processing equipment and computers . Tan also teaches automatically developing using iteration and the use of a manufacturing execution system. Tan further teaches that the interfacing allows translation of commands and tool control in col. 7, lines 1-20. Tan also teaches configuring and modification in col. 5, lines 15-45. See the abstract; figures; col. 2, line 58 to col. 3, line 48; col. 5, lines 15-67; col. 6, line 51 to col. 8, line 35; col. 9, lines 1-26; col. 11, lines 1-45; col. 12, lines 18-67; col. 13, lines 1-63; col. 14, lines 43-57; col. 15, line 19 to col. 16, line 17; col. 29, lines 58-64; and the claims.

Tan however does not specifically state that the tool is modeled, but does teach modeling a process and the use of plural tools. See col. 5, lines 63-65; and claims 8 and 9; col. 3, lines 18-21; for example.

It would have been obvious to one of ordinary skill in the art to modify Tan to model a process as either a model of the tool used to perform the process or the actual process model depending upon which is either easier to model, simpler to model, or more accurate.

Tan however does not teach the use of a visual workflow.

Art Unit: 2125

Mashruwala et al. teaches the use of a visual workflow for ease in operator use. See the abstract ; figures; col. 2, lines 3-29; and col. 3, line 65 to col. 4, line 52.

It would have been obvious to one of ordinary skill in the art to modify Tan in view of Mashruwala et al. to use a visual workflow for ease in modeling the system and operator use.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Campbell et al. 6,529,789 is of interest in APC control and the use of plural tools.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven R Garland whose telephone number is 703-305-9759, after 10/13/04 at 571-272-3741. The examiner can normally be reached on Monday-Thursday from 6:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on 703-308-0538 after 10/12/04 at (571)272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

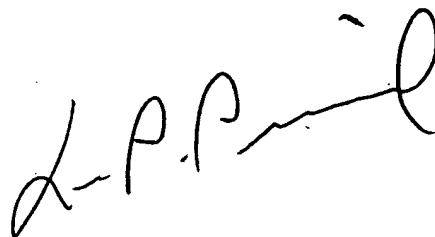
Application/Control Number: 09/363,966
Art Unit: 2125

Page 8

you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

sm6

STEVEN GARLAND

A handwritten signature in black ink, appearing to read "L. Picard", with a stylized flourish at the end.

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Notice of References Cited	Application/Control No. 09/363,966	Applicant(s)/Patent Under Reexamination ARACKAPARAMBIL ET AL.	
	Examiner Steven R Garland	Art Unit 2125	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,529,789	03-2003	Campbell et al.	700/115
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.